

# Notice of Allowability

Application No.

10/619,772

Examiner

William K Cheung

Applicant(s)

RAMESH ET AL.

Art Unit

1713

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_\_.
  2. ☒ The allowed claim(s) is/are 1-31.
  3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
  4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 0715
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **DETAILED ACTION**

1. The instant application is a divisional application of U.S. Serial No. 09/747,472, filed December 22, 2000. Claims 1-31 are pending.

### ***Allowances***

2. Claims 1-31 are allowed.
3. The following is an examiner's statement of reasons for allowance:

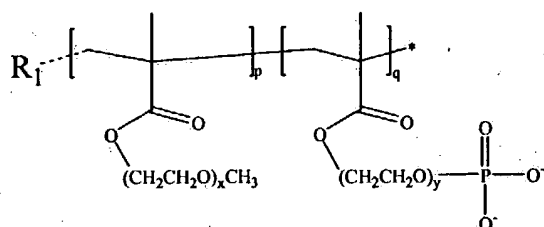
As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the closest prior art of Mayer et al. (US 6,309,707 B1) to render the present invention anticipated or obvious to one of ordinary skill in the art.

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The invention of claims 1-24 relates to a **water-based acrylic emulsion dispersant** for efficient wetting and grinding of a pigment, said acrylic emulsion dispersant comprising the reaction product of:

- an ethylenically unsaturated monomer;**
- a vinylaromatic hydrocarbon monomer;**
- a nonfunctional polyalkylene glycol acrylate or methacrylate monomer,**
- a functional polyalkylene glycol acrylate or methacrylate monomer having a hydroxyl group; and**
- an acid having a first functional acid group reactive with said hydroxyl group, and a second functional acid group capable of providing an acid anion group.**

The invention of claims 25-30 relates to a **water-based acrylic emulsion dispersant** for efficient wetting and grinding of a pigment, said **acrylic emulsion dispersant** being of the general formula:



wherein;

$R_1$  is a polymer chain containing monomers selected from the group consisting of **ethylenically unsaturated monomers and vinylaromatic hydrocarbon monomers**, and mixtures thereof;

$p$  and  $q$  are from 1 to 100; and

$x$  and  $y$  are from 5 to 50.

The invention of claim 31 relates to a **water-based acrylic emulsion dispersant** for efficient wetting and grinding of a pigment, said **acrylic emulsion dispersant** comprising the reaction product of:

an **ethylenically unsaturated monomer**;

a **vinylaromatic hydrocarbon monomer**;

a **non-functional monomer** selected from the group consisting of **non-functional polyalkylene glycol methacrylate monomers and non-functional polyalkylene glycol acrylate monomers**;

a **functional monomer** selected from the group consisting of **functional polyalkylene glycol methacrylates having a hydroxyl group and functional polyalkylene glycol acrylate monomers having a hydroxyl group**; and

***an acid having a first functional acid group reactive with said hydroxyl group, and a second functional acid group capable of providing an acid anion group.***

The closest prior art Mayer et al. (abstract; col. 5, 1-42)) discloses a coating composition comprising a component (A1) which comprises an carboxyl-free (meth)acrylic ester, an ethylenically unsaturated monomer which carries at least one hydroxyl group, and an ethylenically unsaturated monomer which carries at least one carboxyl group in an organic solvent (col. 5, line 5-8). Mayer et al. (col. 5, line 35-43; col. 7, line 12-18) disclose that the component (a6), a subcomponent of (A1), could be styrene, alkylstyrene, or vinyltoluene. Mayer et al. (col. 5, line 59 to col. 6, line 7) also disclose that the said ethylenically unsaturated monomer which carries at least one hydroxyl group (a2) may become a hydroxyalkyl esters of acrylic acid or methacrylic acid when reacts with an alkylene glycol.

Although Mayer et al. only disclose pieces of features that may be assembled to the claimed composition, however, Mayer et al. are silent on applicants' critical claimed feature which involves having a first functional acid group reactive with the hydroxyl group within the claimed aqueous composition. Further, because Mayer et al. (abstract) clearly disclose that the coating composition is either dissolved or dispersed in organic solvent while the claimed invention is clearly related to an aqueous dispersion, the examiner has a reasonable basis to believe that composition of Mayer et al. and the

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claimed composition are different. Therefore, in view of these differences above, it would not be apparent to one of ordinary skill in art to use the composition teaching in Mayer et al. to obtain the invention of claims 1-24, and 31.

Regarding the invention of claims 25-30, Mayer et al. are silent on a composition comprising a polymeric phosphate having an alkylene oxide unit as a spacer group between the acrylate and the phosphate group.

In view of the reasons set forth above, claims 1-31 are allowed.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, and to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung

Patent Examiner

April 17, 2004